

500 kg potatoes TO MARS  
What are the potatoes going to  
weight on MARS?

① Data  $m = 500 \text{ kg}$   
 $g_{\text{mars}} = 3.8 \text{ m/s}^2 \downarrow$

②  $W = mg$

③  $W = (500 \text{ kg})(3.8 \text{ m/s}^2) \downarrow$

④  $W = 1900 \text{ N} \downarrow$



✓  $a = 5 \text{ m/s}^2 \rightarrow$

✓  $m = 3000 \text{ kg}$

What is the force?  $F$

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②  $F = ma$

③  $F = (3000 \text{ kg})(5 \text{ m/s}^2 \rightarrow)$

④  $F = 15,000 \text{ N} \rightarrow$

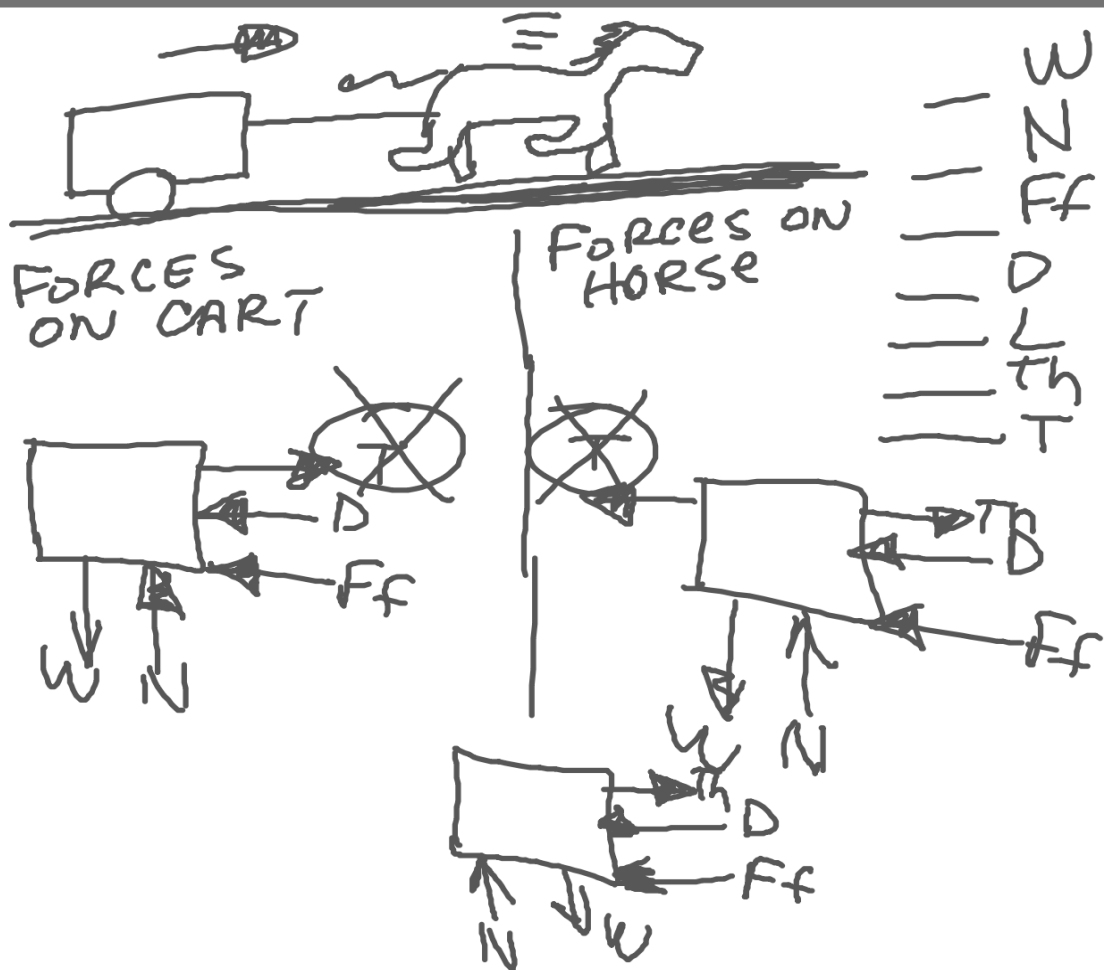
$a = 5 \text{ m/s}^2$

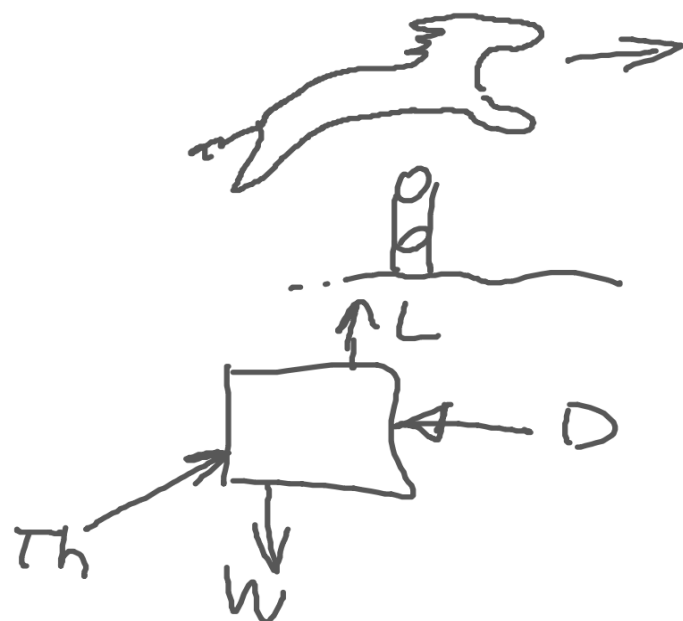
$F = 15,500 \text{ N} \rightarrow$

$m = 3100 \text{ kg}$

$3100 \text{ kg} \times 2.2 \frac{\text{kg}}{\text{kg}}$

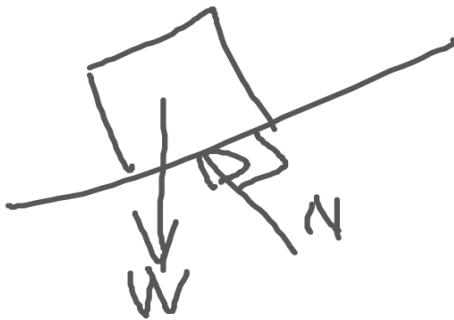
$6800 \frac{\text{kg}}{\text{kg}}$





	W
X	N
<u>X</u>	Ff
—	L
—	D
X	Th
	T

What DIRECTION is the  
NORMAL FORCE?  
⊥ TO SURFACE



What 2 parts ARE important  
IN  $F_f$ ?

$$F_f = \mu N$$

$\mu$  = Coefficient of Friction

$N$  = NORMAL FORCE

UNITS	
MASS	kg
gravity	$m/s^2 \downarrow$
Weight	$N \downarrow$
Force	$N \rightarrow$
acceleration	$m/s^2 \leftarrow$